

Appl. No. 09/515,766
Amdt. Dated October 12, 2004
Reply to Office action of June 15, 2004
Attorney Docket No. P11150-US1
EUS/J/P/04-2133

Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) Communication network for voice telephone calls, said network having a packet switched protocol based cellular telephone network comprising a first layer for transferring only signalling information assigned to a telephone call being processed by the communication network, a second layer for transferring only payload information assigned to the telephone call and interface means for coupling the cellular telephone network to a further network, the interface means comprising signalling information exchange function between the cellular telephone network and the further network and payload information exchange function between the cellular telephone network and the further network, the first layer and the second layer of the cellular telephone network being coupled to the interface means, wherein the second layer of the cellular telephone network transfers the payload information of the telephone call to and from the interface means on a direct route assigned to the telephone call, wherein the first layer of the cellular telephone network comprises at least one mobile services switching center being coupled to the interface means, and wherein the second layer of the cellular telephone network comprises a number of base transceiver stations, each base transceiver station handling the radio link protocol functions to mobile stations within a cell area assigned to the respective base transceiver station and wherein each base transceiver station is directly connected to the interface means for payload information exchange within the second layer.

2. (Cancelled)

3. (Previously Presented) Communication network of claim 1, wherein the interface means comprises media gateway means for payload information exchange between the cellular telephone network and the further network and to be coupled directly to the base transceiver stations.

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4. (Cancelled)

5. (Previously Presented) Communication network of claim 1, wherein the interface means comprises media gateway means for payload information exchange between the cellular telephone network and the further network and wherein the mobile services switching center is connected to a media gateway of the interface means to control the media gateway.

6. (Previously Presented) Communication network of claim 1, wherein the first layer comprises at least one mobile services switching center being coupled to the interface means for signalling information exchange.

7. (Previously Presented) Communication network of claim 6, wherein the interface means comprises a signalling gateway for signalling information exchange between the cellular telephone network and the further network and wherein the mobile services switching center is connected to the signalling gateway to exchange signalling information between the signalling gateway and the mobile services switching center.

8. (Previously Presented) Communication network of claim 1, wherein the first layer of the cellular telephone network comprises at least one mobile services switching center and at least one base station controller being coupled to a number of base transceiver stations of the second layer and being connected to at least one mobile services switching center wherein the base station controller controls each of the base transceiver stations by means of a device control protocol function and communicates to the mobile services switching center by means of an application signalling protocol function.

9. (Previously Presented) Communication network of claim 1, wherein the cellular telephone network is a GSM network.

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10. (Previously Presented) Communication network of claim 1, wherein the further network is a packet switched network.

11. (Previously Presented) Communication network of claim 10, wherein the packet switched network is the Internet, a VoIP network, an Internet Protocol network, a GPRS network or a UMTS network.

12. (Previously Presented) Communication network of claim 9, wherein the further network is a circuit switched network.

13. (Original) Communication network of claim 12, wherein the circuit switched network is a ISDN network, a Public Land Mobile Network PLMN network or a Public Switched Telephone Network PSTN network.

14. (Currently Amended) Method for operating a communication network for voice telephone calls, said network having a packet switched protocol based cellular telephone network, said method comprising the steps of:

~~a first layer for~~ transferring only signalling information assigned to a telephone call being processed by the communication network~~[[,]]~~ on a first layer of said cellular telephone network; and

~~a second layer for~~ transferring only payload information assigned to the telephone call on a second layer of said cellular telephone network; and

wherein Interface means ~~for coupling~~ couples the cellular telephone network to a further network, the Interface means comprising a signalling information exchange function between the cellular telephone network and the further network and a payload information exchange function between the cellular telephone network and the further network, the first layer and the second layer of the cellular telephone network being coupled to the interface means, the method further comprising transferring the payload information of the telephone call to and from the interface means via a direct route through the second layer.

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15. (Previously Presented) Method of claim 14, wherein, after initialising the telephone call, in a base transceiver station of the second layer which is assigned to said call, base transceiver station (BTS) address information is generated and forwarded via the first layer of the cellular telephone network to the interface means, and interface address information or media gateway address information is generated in the interface means and forwarded via the first layer of the cellular telephone network to the base transceiver station for establishing a direct the second layer between the base transceiver station and the interface means to allow direct data, payload and call information exchange between the interface means and the base transceiver station and vice versa, wherein at least one mobile services switching center is provided within the first layer of the cellular telephone network, the method providing a mobile services switching center (MSC) device control protocol for signalling information exchange between the mobile services switching center and the interface means, and wherein at least one base transceiver station of the second layer is provided, wherein each said base transceiver station handles the radio link protocol functions to mobile stations within an assigned cell area, the method providing a payload protocol function for direct payload information exchange between each base transceiver station and the interface means via the second layer of the cellular telephone network.

16-17. (Cancelled)

18. (Previously Presented) Method of claim 15, wherein the interface means comprises a media gateway for payload information exchange between the cellular telephone network and the further network and the mobile services switching center being connected to the media gateway to exchange signalling information between the media gateway and the mobile services switching center by the mobile services switching center (MSC) device control protocol function.

19. (Previously Presented) Method of claim 14, wherein the first layer of the cellular telephone network comprises at least one mobile services switching center

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being coupled to the interface means and the method providing a trunk signaling protocol function for signaling information exchange between the mobile services switching center and the interface means.

20. (Previously Presented) Method of claim 19, wherein the interface means comprises a signalling gateway means for signalling information exchange between the cellular telephone network and the further network and the mobile services switching center being connected to the signalling gateway means, the trunk signalling protocol function is used to exchange signalling information between the signalling gateway means and the mobile services switching center within the first layer.

21. (Previously Presented) Method of claim 14, wherein the first layer of the cellular telephone network comprises at least one mobile services switching center and a least one base station controller coupled to a number of base transceiver stations of the second layer and being connected to the mobile services switching center, the method providing a device control protocol function to be established between the base station controller and each of the base transceivers for controlling of the base transceiver stations and the information exchange between the base station controller and the base transceiver stations, and the method providing an application signalling protocol function to be established between the base station controller and the mobile services switching center.

22. (Previously Presented) Method of claim 21, wherein, after initiating a new call by a mobile station, a call identification information being assigned to the new call is generated and stored within the mobile services switching center, then the call identification information is sent by the application signalling protocol function from the mobile services switching center to the base station controller.

23. (Previously Presented) Method of claim 22, wherein the call identification information from the mobile services switching center is stored within the

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base station controller and a corresponding request is forwarded to a base transceiver station by means of the device control protocol function being established between the base station controller and the base transceiver station.

24. (Previously Presented) Method of claim 23, wherein after receiving the call identification information from the base station controller a base transceiver station (BTS) address information is generated in the base transceiver station, the base transceiver station (BTS) address information identifies the base transceiver station being assigned to the call and the call within the base transceiver station in order to allow direct payload information exchange within the second layer of the cellular telephone network between the base transceiver station and the media gateway.

25. (Previously Presented) Method of claim 24, wherein the generated base transceiver station (BTS) address information is forwarded to the base station controller.

26. (Previously Presented) Method of claim 23, wherein the call identification information from the base station controller is stored in the base transceiver station.

27. (Previously Presented) Method of claim 26, wherein after receiving the base transceiver station (BTS) address information from the base transceiver station, the base station controller forwards the base transceiver station (BTS) address information to the mobile services switching center.

28. (Previously Presented) Method of claim 27, wherein after requesting a connection from the media gateway the call identification and the base transceiver station (BTS) address information are sent to the media gateway utilising the mobile services switching center (MSC) device control protocol function.

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29. (Previously Presented) Method of claim 28, wherein a request for through-connection is sent from the mobile services switching center to the media gateway by means of the mobile services switching center (MSC) device control protocol function.

30. (Previously Presented) Method of claim 26, wherein media gateway address information which identifies the media gateway is forwarded back to the mobile services switching center by means of the mobile services switching center (MSC) device control protocol.

31. (Previously Presented) Method of claim 30, wherein after receiving the media gateway address information from the media gateway the media gateway address information is forwarded from the mobile services switching center via the base station controller to the base transceiver station for establishing a through-connection between the media gateway and the base transceiver station on the basis of the BTS information and the media gateway address information in order to permit direct exchange of information between the media gateway and the base transceiver station and vice versa.

32. (New) Communication network for voice telephone calls, said network having a packet switched protocol based cellular telephone network comprising a first layer for transferring only signalling information assigned to a telephone call being processed by the communication network, a second layer for transferring only payload information assigned to the telephone call and interface means for coupling the cellular telephone network to a further network, the interface means comprising signalling information exchange function between the cellular telephone network and the further network and payload information exchange function between the cellular telephone network and the further network, the first layer and the second layer of the cellular telephone network being coupled to the interface means, wherein the second layer of the cellular telephone network transfers the payload information of the telephone call to

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and from the interface means on a direct route assigned to the telephone call, wherein the first layer of the cellular telephone network comprises at least one mobile services switching center being coupled to the interface means, and wherein the second layer of the cellular telephone network comprises a Base Station Subsystem directly connected to the interface means for payload information exchange within the second layer.